- **detecting an error in the information of one of the pixel blocks in each of at least two frames which are prior to a present frame,**
- **storing error information of the one of the pixel blocks in each of the at least two frames which are prior to the present frame, in an error memory,**
- storing in a frame memory, video information of the at least two frames which are prior to the present frame,
- generating, from the at least two frames, at least two predicted pixel blocks corresponding to a present pixel block in the present frame,
- **judging if one of the at least two predicted pixel blocks corresponds to error information of the at least two frames stored in the error memory,**
- based on the judging, determining if the one of the at least two predicted pixel blocks is used in reconstructing the present pixel blocks.

It is Applicant's contention that the method for decoding an image signal as defined in claim 12 is patentably distinguished from the Sun and Tahara Patents at least based on the requirement of detecting an error in the information of one of the pixel blocks in each of at least two frames which are prior to a present frame; storing error information of the one of the pixel blocks in each of the at least two frames which are prior to the present frame, in an error memory; and judging if one of the at least two predicted pixel blocks corresponds to error information of the at least two frames stored in the error memory. It is Applicant's contention that these features of claim 12 are neither taught nor suggested in the Sun and Tahara Patents.

The Tahara Patent concerns, in general, a coding system for transmitting stereo image data. It is Applicant's contention that the Tahara Patent teaches away from the selection of two blocks which are included in two different frames respectively based on error information (i.e., in an error map) as set forth in Applicant's claimed invention. Tahara discloses only two motion vectors x2 and x3 relating two different frames to a present frame (see Figure 4, F1-F3). The vectors in the Tahara Patent are used only for video coding using the correlation between frames. Tahara does not disclose that the motion vectors are used for error concealment when video decoding is performed.

In Applicant's claimed invention, an appropriate predicted pixel block is selected from a plurality of frames based on the error information (i.e., in an error map). Each error map

corresponds to a respective frame memory. The motion vectors are used to determine an appropriate block in the frame memory.

Applicant's invention is not concerned with using a plurality of motion vectors between a plurality of preceding frames and the present frame as contended by the Examiner, but it is instead determining a block for reconstructing a present block based on the motion vectors. This latter concept is simply not taught or suggested in the Tahara Patent.

In sum, it is Applicant's contention that the features noted above with respect to claim 12 are simply not taught in the Tahara Patent. Nor are these features taught in the Sun Patent.

The Sun Patent, in general, concerns an error concealment apparatus for HDTV receivers. But nowhere in the Sun Patent are disclosed or suggested the features noted above with respect to claim 12.

Applicant notes that the Examiner takes the position that the Sun Patent discloses means for storing video information of at least two frames which are prior to a present frame. In this connection, the Examiner points to Figure 5 of the Sun Patent and the buffer memory 316 shown therein. While the buffer memory 316 may show plural frame memories, the object of the buffer memory in having plural frame memories is for use in decoding compressed video signals by inter-frame coding, like MPEG. Furthermore, an error concealment is performed by replacing the error block by the block in the buffer memory 316. (See for example, column 9, line 45 to column 10, line 4 of the Sun Patent.) But nowhere in the Sun Patent is there any teaching or suggestion of a frame being selected from a plurality of frame memories. Thus, it is Applicant's contention that the Examiner may have misconstrued the Sun Patent, at least relative to Applicant's claimed invention.

The relevant point of the Sun Patent is that depending upon the relative amount of motion or detail in adjacent image areas, the current image area is replaced with spatially synthesized or temporally co-located data respectively. (See for example, the Summary Of The Invention section of the Sun Patent at column 2, lines 16-20.) Moreover, a replacing block for the error concealment in the Sun Patent is limited within only one frame. There is simply no suggestion or teaching in the Sun Patent of employing the preceding plural images because it is not necessary if the replacing block is selected between two alternatives for the reasons noted above. Because Sun lacks this teaching, Applicant contends that one skilled in the art would not be apt to consider combining Sun with Tahara to achieve Applicant's claimed invention.

While Applicant agrees with the Examiner that Sun does not disclose the feature "in each of at least two frames which are not prior to the present frame" as set forth in claim 12, the Sun Patent also does not disclose the other features noted above with respect to claim 12. And it is Applicant's contention that for the reasons noted above, this deficiency of the Sun Patent is not rectified by the Tahara Patent.

Applicant further submits that the above noted features of independent claim 12 are similarly found in independent claims 16, 17 and 20. Thus, all pending claims are patentably distinguished from the Sun and Tahara Patents for the reasons noted above. Applicant therefore requests that the Section 103(a) rejections directed to these claims be withdrawn.

In view of the foregoing remarks and amendments, Applicant respectfully submits that claims 2, 7, and 12-20 are in condition for allowance. Reconsideration and allowance of all pending claims are respectfully requested.

Applicant is filing this Response on February 19, 2003. The Patent and Trademark Office was closed on February 18, 2003 because of the snow emergency situation. Applicant and Applicant's counsel understand that no extension fee is due because the Patent and Trademark Office was closed on February 18, 2003. If, however, Applicant and Applicant's counsel are mistaken, please deduct any charge, such as an extension fee, from Deposit Account No. 18-0350.

Respectfully Submitted,

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The Assistant Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. 18-0350 of any fees associated with this communication.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on: **February 19, 2003**

Daniel N. Calder